WELCOME BY GEORGIA TECH PRESIDENT G. WAYNE CLOUGH
Broadband Last-Mile Technology Committee
of the National Academies' Computer Science and Telecommunications Board
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- You are in the house that stands at the end of the last mile of broadband technology. We are pleased to welcome you to Georgia Tech, to GCATT, and to this Residential Laboratory of our Broadband Institute. This is where our Aware Home researchers are exploring and demonstrating the ability of communications technology to enhance daily life in the home of the future, both for families in general and for special inhabitants like infants, the handicapped, and the elderly.

- The existence of the Broadband Last-Mile Technology Committee reflects the fact that for many Americans, the last mile for broadband technology is the distance between hype and reality.

- The dream is that broadband access will connect all homes and offices in a web of overlapping technologies. But the reality proves the saying, "The devil is in the details."
    - Customers are faced with a jumble of technologies, from copper phone lines to fiber-optic lines to cable TV modems, with more on the way.
    - For the 50 million Americans in small towns and rural areas who can't get access through any of these means, there's satellite access. Its capabilities were demonstrated by a company called StarBand, which took equipment by helicopter and mule train to the bottom of the Grand Canyon and providing Internet service to a Native American tribe so remote it was beyond the reach of radio signals.

- In the case of wired access, customers buy an Internet connection from a service provider like EarthLink, which in turn contracts with a data transmission company, which in turn contracts with the phone company that actually owns the lines. When something goes wrong, customers, who are expecting the same kind of service they get from utilities, find themselves spending days, even weeks, yelling at three different companies, each of which refuses to take responsibility. In the meantime, the customer's business is self-destructing.

- With satellites, the problem is slightly different. Heavy rain and wet snow distort the signal, and when a strong wind knocks your dish out of alignment you lose the signal altogether. In this case, it can take days or even weeks to get a technician to come out and realign your dish.

- Researchers at the Georgia Tech Research Institute have developed what they believe is a better alternative for rural areas. Their technology allows the simultaneous delivery of telephone service, digital TV, and high-speed Internet connections over traditional phone lines. It is presently under testing in rural Hart County, Georgia, population 18,000.

- Beyond the technology itself, there are other problems. The Federal Communications Commission still has not caught up with the existing technology, so the policy and regulatory climate is not what it needs to be, even as the technology continues to forge ahead.

- The business climate surrounding the implementation of broadband in that last mile is also uncertain. We've been hearing in recent months of smaller service providers going bankrupt. In some places, traditional phone companies are emerging as major providers, but this raises the question of whether these larger, more traditional corporate structures can stay on top of a complicated technology with a high growth rate.

- Last summer Georgia Tech hosted the Congressional Web-Based Education Commission on campus, and last month the commission released its report. The report says that broadband is absolutely critical to education. It identifies a technology gap between those who have broadband access and those who don't, and calls for access to be made widely and equitably available and affordable for all learners. This is yet another challenge.

- Fortunately, the Computer and Science Telecommunications Board of the National Academies wisely recognized the need for somebody to look at the big picture and created the Broadband Last Mile Technology Committee to:
    - Develop an understanding of emerging technology trends and directions;
    - Project those trends across that last mile into realistic, practical models for application in homes and businesses;
    - Help get the regulatory picture right.

- We at Georgia Tech are very pleased to have Nikil Jayant chairing the Broadband Last Mile Technology Committee, and to have you here today.

- Georgia is very serious about becoming a leader in broadband technology, and Georgia Tech is playing a central role in that effort:
    - GCATT
    - Yamacraw (research; expanded education programs; seed venture capital fund)

    - These undertakings are partnerships that involve research universities, private industry, and government.

- My own personal leadership is focused on policy discussions in my capacity as co-chair of the Internet Policy Institute.

- Pleased to have the opportunity to contribute to the Broadband Last Mile Technology Committee, and we look forward to working with you to help America travel that final mile between where we are now and the dream that is embodied by this Broadband Residential Lab.